

CLAIMS:

1. Spherical particles for thermal spraying, consisting essentially of a rare earth(inclusive of yttrium)-containing  
5 compound and having a breaking strength of at least 10 MPa and an average particle diameter of 10 to 80  $\mu\text{m}$ .

2. Spherical particles for thermal spraying, consisting essentially of a rare earth(inclusive of yttrium)-containing  
10 compound and having a bulk density of at least  $1.0 \text{ g/cm}^3$ , an aspect ratio of up to 2, and a cumulative volume of pores with a radius of up to  $1 \mu\text{m}$  which is less than  $0.5 \text{ cm}^3/\text{g}$ .

3. The spherical particles of claim 2 having a particle  
15 size distribution in which a particle diameter D90, D50 and D10 corresponds to 90 vol%, 50 vol% and 10 vol% accumulation, respectively, wherein D90 is up to  $100 \mu\text{m}$  and the ratio of D50 to a Fisher diameter is up to 5.

20 4. The spherical particles of claim 3 wherein D10 is at least  $5 \mu\text{m}$ , and the particles have a dispersion index of up to 0.6.

5. The spherical particles of claim 1 wherein said rare  
25 earth-containing compound is a rare earth oxide or rare earth compound oxide.

6. The spherical particles of claim 2 wherein said rare  
30 earth-containing compound is a rare earth oxide or rare earth compound oxide.

7. A thermal sprayed component comprising a substrate  
having a surface and a coating of the rare earth-containing  
compound particles of claim 1 thermally sprayed to the  
35 substrate surface.

8. A thermal sprayed component comprising a substrate having a surface and a coating of the rare earth-containing compound particles of claim 2 thermally sprayed to the substrate surface.